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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,802

04/16/2007

John David Payne

102613-112

8862

27267

7590

04/28/2009

WIGGIN AND DANA LLP  
ATTENTION: PATENT DOCKETING  
ONE CENTURY TOWER, P.O. BOX 1832  
NEW HAVEN, CT 06508-1832

EXAMINER

KUMAR, PREETI

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,802	<b>Applicant(s)</b> PAYNE ET AL.	
	<b>Examiner</b> PREETI KUMAR	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/1/07</u> .   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. Claims 1-26 are pending.
2. Claims 1, 3, 13, 15, 19, and 21 are independent.

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

4. The information disclosure statement (IDS) submitted on 10/1/2007 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 25-26 provides for the use of the composition of claim 1, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.
6. Claims 25-26 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under

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35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claims 1-7 and 9-26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Payne (US 5,700,742).

Payne teaches antimicrobial treatment of textile material with poly(hexamethylene biguanide) and a strong organic acid to protect against yellowing and loss of antimicrobial activity. See abstract. Regarding the claimed 1 to 50 wt% of at least a self-crosslinkable resin, Payne teaches the utility of phenolformaldehyde or urea-glyoxal resins commonly known in the art to provide crease resistance. See col.6,ln.5 and table 6, col.10 where the prior art teaches 1% melamine resins.

Regarding the claimed 0.25 to 20 wt% of at least a catalyst; Payne teaches 0.5% oxalic acid and 0.1% poly(hexamethylene biguanide) in example 20 of table 4 in col.8.

Regarding the claimed 0.1 to 4 wt% of at least an antimicrobial active agent, reactive with the resin, Payne teaches 0.01 up to 2% biguanide may be sufficient to confer an antimicrobial effect to the material. See col.6,ln.30-35.

Regarding the claimed noncelluloic fibers, Payne teaches in col.5,ln.50-55, the treatment of textile material include polyester, polyamide or polyurethane.

Regarding the method claims of 13-18, Payne illustrates in at least example 21 the treatment of non-cellulosic blended fabric with a treatment solution of 0.1% poly(hexamethylene biguanide), 0.5% aqueous solution of oxalic acid and 0.2% solution of a glycoluril resin containing an acid catalyst with the subsequent steps of drying and curing/baking for 10 minutes at 140 degrees C to cure the resin. Examiner acknowledges that the prior art teaching of Payne does not specifically teach a curing state carried out in the time range of 30 seconds to 5 minutes. However, Payne illustrates 10 minutes of curing which teaching along with the common knowledge that there is an inverse relationship with the temperature and time needed to cure, apprises one of ordinary skill to modify the curing time range and curing temperature as claimed.

Payne does not specifically teach the claimed acid value or moisture regain of  $\leq 5\%$ . However, it is reasonable to presume said limitations are met by the teachings of the prior art since the reference teaches the analogous oxalic acid with the analogous poly(hexamethylene biguanide) antimicrobial catalyst. The same components being

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claimed are taught by the prior art in the same ratios and thus can reasonably be expected to have the same acid value and moisture regain of  $\leq 5\%$ .

Payne does not specifically teach the claimed 98.65 to 26 wt% of water as recited by the instant independent claims. However, in example 21, Payne teaches an antimicrobial composition comprising 0.1% aqueous solution of poly(hexamethylene biguanide), 0.5% aqueous solution of oxalic acid and 0.2% solution of a glycoluril resin containing an acid catalyst. It would have been obvious, to one of ordinary skill in the art, to arrive at the claimed 98.65% water since the prior art teaches immersion of textile in dilute aqueous solutions of the acid, catalyst, and resin composition. See ex.21.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Payne (US 5,700,742) as applied to claims 1-7 and 9-26 above, and further in view of North (US 5,352,372).

Payne is relied upon as set forth above.

Payne does not specifically teach the claimed self-crosslinkable resin selected from DMDHEU and DHDMEU both of which have the same CAS # 1854-26-8.

North teaches treating textile fabrics with DMDHEU/polyol and organic acid catalyst to reduce or eliminate free formaldehyde in the resin while providing a non yellowing treated fabric. See abstract and col.2,ln.40.

It would have been obvious to one of ordinary skill in the art, to modify the teachings of Payne with the DMDHEU resin as taught by North since the primary reference teaches using a urea resin in general and North teaches the specific utility of DMDHEU in the analogous art of treating textile fabrics.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PREETI KUMAR whose telephone number is (571)272-1320. The examiner can normally be reached on 7:30 am-3:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory R. Del Cotto/  
Primary Examiner, Art Unit 1796

/P. K./  
Examiner, Art Unit 1796